

Date: Sat, 23 Oct 93 04:30:28 PDT  
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>  
Errors-To: Ham-Homebrew-Errors@UCSD.Edu  
Reply-To: Ham-Homebrew@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Homebrew Digest V93 #81  
To: Ham-Homebrew

Ham-Homebrew Digest                      Sat, 23 Oct 93                      Volume 93 : Issue    81

Today's Topics:

                    How to do CW with a cb?  
                                INTERMOD  
            Need Louder PC Speaker for Code Practice.  
                    Santec ST-7/T Help ?  
            Temp control soldering iron? (2 msgs)  
                    Transistor substitution question

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>  
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 23 Oct 93 00:59:33 GMT  
From: ogicse!uwm.edu!cs.utexas.edu!swrinde!menudo.uh.edu!mtecv2.mty.itesm.mx!  
all152511@network.ucsd.edu  
Subject: How to do CW with a cb?  
To: ham-homebrew@ucsd.edu

        Hello, everybody in the group!!

        I am looking to practice the code to get an amateur license, and would like to  
know if there is a way to make a cb radio to transmute in CW, or how to make it  
transmute with a "fake" CW, only using a key to make noise, and communicate with a  
partner equipped in the same manner.

        Does anyone have try this, and it worked?

Our radios have extra frequencies and we live in in a rural area, so it is very

few the disturbance we could cause, if any, to the neighbors.

Any comments would be very appreciated.

Entonces vinieron por mi,  
y para entonces,  
no habia nadie que hablara en mi favor

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Date: 22 Oct 93 17:33:59 GMT  
From: ogicse!emory!rsiatl!ke4zv!gary@network.ucsd.edu  
Subject: INTERMOD  
To: ham-homebrew@ucsd.edu

In article <1993Oct20.125238.17433@schbbs.mot.com> CSLE87@maccvm.corp.mot.com  
(Karl Beckman) writes:

>Gary, I think you missed a very subtle difference. Dave Feldman really  
>did say and mean PRE-AMP, not POWER AMPLIFIER. Therefore his approach  
>is technically correct and viable, although your technically better  
>idea of using a bandpass filter was expressed by others and apparently  
>will be in print in the next issue of QST.

You, and everybody else who caught this, are absolutely right. I didn't  
read the original carefully enough. You could use a burnt out power  
amp though, you'd just have to wire the attenuator in the receive line  
and strap out the power section to straight through.

Gary

--  
Gary Coffman KE4ZV                   |"If 10% is good enough | gatech!wa4mei!ke4zv!gary  
Destructive Testing Systems | for Jesus, it's good   | uunet!rsiatl!ke4zv!gary  
534 Shannon Way               | enough for Uncle Sam."| emory!kd4nc!ke4zv!gary  
Lawrenceville, GA 30244       | -Ray Stevens           |

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Date: Thu, 21 Oct 93 17:10:31 GMT  
From: mercury.hsi.com!a3bee2.radnet.com!cyphyn!randy@uunet.uu.net  
Subject: Need Louder PC Speaker for Code Practice.  
To: ham-homebrew@ucsd.edu

Richard L Barnaby (rbarnaby@world.std.com) wrote:  
: I'd like to add a simple speaker to an IBM PC that is externally

: controlled. Just an op-ap, a pot, and a speaker? Tap into the  
: pc's speaker "jack"?

That'll work....just don't connect direct to the speaker it self IN the PC.

Use an LM 386 set up for low gain:

(10 uf in series to 5600 ohms for pin 1 & 8 ckt  
leave pin 7 open ckt  
wire the rest as usual, but put 2nd 10 ohms inseries to the speaker  
because, that chip will run HOT if you try to drive less than 16 ohms)

: Impedence of speaker matter? Any ol' radio shack \$5 speaker do?  
Any of 8 ohms or more will work, 1/4 watt or more, rated....using LM 386.

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Randy KA1UNW	If you get a shock while	
	servicing your equipment,	"Works for me!"
randy@192.153.4.200	DON'T JUMP!	-Peter Keyes
	You might break an expensive tube!	

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Date: 22 Oct 1993 13:48:31 GMT  
From: bloom-beacon.mit.edu!senator-bedfellow.mit.edu!w1gsl@uunet.uu.net  
Subject: Santec ST-7/T Help ?  
To: ham-homebrew@ucsd.edu

Posted for a friend without Net access. Replies to this account will  
be passed on.

Santec ST-7/T Help

I'm trying to resurrect a flea market bargain. Can anyone  
provide me with a schematic, operating or service manuel  
for this 440 MHz HT? I'd be glad to pay copying / mailing  
costs.

Thanks  
W1BG  
Penn Clower

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Steve Finberg                      W1GSL                      w1gsl@athena.mit.edu

PO Box 82 MIT Br Cambridge MA 02139

617 258 3754

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Date: 22 Oct 93 19:37:03 GMT

From: ogicse!hp-cv!sdd.hp.com!col.hp.com!srgenprp!alanb@network.ucsd.edu

Subject: Temp control soldering iron?

To: ham-homebrew@ucsd.edu

Bob Schetgen (KU7G) (rschetge%arrl.org) wrote:

: As ARRL Handbook Editor, I would like to update the old  
: standby soldering iron project to a newer approach.

You mean my old WW-II surplus variac is not state-of-the-art? :=)

: Maximum approach: Attach a thermocouple or RTD  
: (resistance temperature detector) near the iron tip and feed  
: temperature info back to control an SCR.

That's what the Weller WTCP-series solder stations do. I think they cost on the order of \$100. You might be able to save some money by buying replacement irons and tips from Weller and inventing your own base unit.

AL N1AL

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Date: 22 Oct 93 17:42:47 GMT

From: ogicse!emory!rsiatl!ke4zv!gary@network.ucsd.edu

Subject: Temp control soldering iron?

To: ham-homebrew@ucsd.edu

In article <2480@arrl.org> rschetge%arrl.org (Bob Schetgen (KU7G)) writes:

> As ARRL Handbook Editor, I would like to update the old  
>standby soldering iron project to a newer approach.

>

> Minimum approach: Place a light dimmer in series with  
>the iron. Pros: cheap, easy. Cons: RFI noisy, only sets an  
>approximate maximum temperature.

>

> Maximum approach: Attach a thermocouple or RTD  
>(resistance temperature detector) near the iron tip and feed  
>temperature info back to control an SCR. Pros: professional  
>quality control. Cons: Complex, expensive. Cost must be <  
>\$100 for parts (I've seen bead thermocouples for \$17, RTDs  
>for \$19).

Let me throw out an idea. Temperature controlled soldering irons are widely available, and often dirt cheap surplus. Something that would be more interesting for today's electronics would be a temperature controlled static hot air source for SMD work.

I would suggest something along the lines of a small tube with a ceramic heating element that has a bead thermistor near the outlet. The thermistor can act as the variable resistance in a 555 astable. The output of the astable can be used to pulse a pass transistor carrying current to the heating element. Add a tiny fan for air movement, and viola, instant hot air source.

Gary

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--
Gary Coffman KE4ZV          | "If 10% is good enough | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | for Jesus, it's good  | uunet!rsiatl!ke4zv!gary
534 Shannon Way           | enough for Uncle Sam."| emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244   | -Ray Stevens          |
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Date: 22 Oct 93 13:22:25 GMT  
From: psinntp!arrl.org@uunet.uu.net  
Subject: Transistor substitution question  
To: ham-homebrew@ucsd.edu

As with all substitutions, it depends a lot on the circuit. Looking at the Smith charts for the grounded emitter input impedance, it looks like they aren't that far off at 80 meters. Some emitter feedback in the circuit will make them even closer.

With the typical class C circuits used by amateurs in CW transmitters, gain shouldn't be a problem below 10 MHz. While the 475 has 8 dB less gain, it is rare to see a circuit needing all 28+ dB of gain the 476 will provide. A single RF stage with that much gain is likely to be unstable.

Linear circuits often have feedback that reduces the effect of variations in device gain. What might happen is that the lower gain device will work just fine at the lower frequencies, but the gain and therefore the output power will become inadequate at the higher frequencies.

The primary disadvantage of the higher power 475 is the much higher output capacitance--looks like 1000 pF vs 125 pF at 10 MHz. You might be able

to modify the output network to handle this. This usually isn't a problem with narrowband tuned circuits, but can be if you are trying to design a wideband network with no adjustments.

Zack Lau KH6CP/1

Internet: zlau@arrl.org "Working" on 24 GHz SSB/CW gear  
US Mail: c/o ARRL Lab  
225 Main Street Station capability: 1.8 MHz to 10 GHz  
Newington CT 06111  
amtor/ baudot  
Phone (if you really have to): 203-666-1541

In rec.radio.amateur.homebrew, epacyna@auratek.COM (Edward Pacyna) writes:

>> The MRF475 is a 12W (PEP) NPN output device, the MRF476 is an NPN 3W  
>> device- same pin-outs, similar voltage ratings (475 VCB0 is 48V, 476 is  
>> 36V). If a single ended application- then it looks like a 475 will  
>> easily replace a 476.  
>> 73, Drew, VK3XU.

>Probably not.

>

>The power gain, base and collector impedances are different. The amount of  
>drive available to ths stage will most likely not be sufficient to overcome  
>these differences.

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End of Ham-Homebrew Digest V93 #81

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